TABLE 2.—*Total radiation received on a horizontal surface from the sun and sky.*

Week beginning—	Average daily radiation.		Average daily departure for the week.		Excess or deficiency since first of year.	
	Washington.	Madison.	Washington.	Madison.	Washington.	Madison.
	Cal.	*Cal.*	*Cal.*	*Cal.*	*Cal.*	*Cal.*
May 28	673	566	179	77	1,321	182
June 4	454	582	—44	79	1,012	734
11	463	480	—50	—38	665	465
18	446	548	—77	17	126	571
25	620	519	96	—21	801	426

SOLAR RADIATION INTENSITIES IN THE PACIFIC COAST STATES.

By HERBERT H. KIMBALL, Professor of Meteorology.

[Weather Bureau, Washington, D. C., July 26, 1920.]

In the REVIEW for November, 1919, **47**:775, an approximate estimate was made of radiation intensities in the Pacific Coast States, based on the intensities measured at Washington and the difference in surface vapor pressures in the two regions.

A recent trip through California and Oregon afforded an opportunity to measure intensities on the Pacific coast at La Jolla, Calif., and at several interior points the coordinates of which are as follows:

Station.	Latitude.	Longitude.	Elevation above sea level.	
	° ′	° ′	*Feet.*	*Meters.*
La Jolla, Calif.	32 50 N.	117 15 W.	100	30
Pomona, Calif.	34 03 N.	117 45 W.	870	265
Fresno, Calif.	36 43 N.	119 49 W.	360	110
Red Bluff, Calif.	40 10 N.	122 15 W.	360	110
Medford, Oreg.	42 20 N.	122 49 W.	1,425	468

The measurements were made with Smithsonian silver disk pyrheliometer No. 1, usually from the roof of the hotel at which I happened to be stopping; but at Fresno and also at Red Bluff, Calif., the instrument was exposed on the roof of the building in which the Weather Bureau office is located.

Table 1 gives a summary of the pyrheliometric measurements. Table 2 gives the surface vapor pressure at the Weather Bureau station nearest to the point of observation, on days when pyrheliometric measurements were obtained. San Diego observations undoubtedly represent sufficiently well the hygrometric conditions at La Jolla, which is only about 16 miles distant along the coast. Those for Los Angeles may not approximate so closely the conditions at Pomona, which is farther inland, and presumably drier. In February, however, the difference between the two stations probably is not great.

Comparing the data of Tables 1 and 2 with corresponding data for February and March given in the REVIEW for April, 1920, page 226, Table 1, it will be seen that while vapor pressures are markedly higher than at Washington, Madison, and Lincoln, the radiation intensities are considerably higher than corresponding normal values for Washington, slightly higher than for Lincoln, and slightly lower than the Madison normals. Furthermore, the intensities show much less change from day to day and from place to place notwithstanding considerable changes in elevation, than do measurements at the stations east of the Rocky Mountains. Apparently, therefore, solar radiation intensities on the coast of southern California, as well as in the interior valleys of California and southern Oregon, are comparable with intensities in the Central and Southern Plains States, at least in the late winter and early spring months.

TABLE 1.—*Solar radiation intensity measurements in California and Oregon during February–April, 1920.*

[Gram calories per minute per square centimeter of normal surface.]

Date.	Sun's zenith distance.										
	0.0°	48.3°	60.0°	66.5°	70.7°	73.6°	75.7°	77.4°	78.7°	79.8°	80.7°
	Air mass.										
	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
POMONA, CALIF.											
	cal.	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
Feb. 26a	1.59	1.45	1.33	1.23	1.13	1.05	0.98	0.91	0.85	0.80	.....
26p	.....	1.43	1.21	1.03	0.90	0.80	0.72	0.67	.....	.....	.....
28a	.....	1.37	.....	.....	.....	.....	.....	.....	.....	.....	.....
LA JOLLA, CALIF.											
Mar. 2p	1.55	1.41	1.29	1.18	1.10	1.03	0.96	0.91	.....	.....	.....
3p	1.51	1.41	1.32	1.24	1.17	1.10	1.04	0.98	.....	.....	.....
4 a. m.	1.56	1.45	1.34	1.25	1.16	1.08	1.02	0.96	.....	.....	.....
4 p. m.	.....	1.45	1.34	1.25	1.16	1.08	1.02	0.96	0.90	0.86	0.81
FRESNO, CALIF.											
Mar. 14a	1.52	1.42	1.34	1.26	1.18	1.11	1.05	0.98	0.91	0.85	.....
14p	1.52	1.42	1.33	1.24	1.15	1.07	1.00	0.93	0.87	0.82	.....
RED BLUFF, CALIF.											
Mar. 23a	1.50	1.41	1.32	1.23	1.15	1.07	.....	.....	.....	.....	.....
25a	.....	1.40	.....	.....	.....	.....	.....	.....	.....	.....	.....
MEDFORD, OREG.											
Mar. 28a	1.55	1.42	1.31	1.21	1.12	1.05	0.98	.....	.....	.....	.....
29a	.....	.....	1.15	.....	.....	.....	.....	.....	.....	.....	.....
29p	1.47	1.37	1.27	1.18	1.10	1.02	0.96	0.91	0.86	0.82	.....
30a	.....	.....	.....	.....	0.90	.....	.....	.....	.....	.....	.....
Apr. 5p	.....	1.40	.....	1.22	1.14	.....	.....	.....	.....	.....	.....
Means	1.53	1.42	1.29	1.21	1.11	1.04	0.97	0.91	0.88	0.83	.....

TABLE 2.—*Surface-water vapor pressures.*

Station.	Date, 1920.	Time (120th meridian).		
		5 a. m.	Noon.	5 p. m.
		mm.	*mm.*	*mm.*
Los Angeles, Calif.	Feb. 26	7.04	5.56	7.57
	Feb. 28	7.04	9.14	8.81
San Diego, Calif.	Mar. 2	.....	8.81	8.48
	Mar. 3	7.87	8.18	7.87
	Mar. 4	6.27	8.18	9.14
Fresno, Calif.	Mar. 14	5.16	4.75	3.99
Red Bluff, Calif.	Mar. 23	6.27	6.76	5.16
	Mar. 24	6.76	4.75	5.36
Medford, Oreg.	Mar. 28	6.02	.....	.....
	Mar. 29	4.95	.....	5.56
	Mar. 30	3.99	.....	.....
	Apr. 5	.....	.....	6.50